



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/015,458	01/29/98	YUFA	A

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EXAMINER
ROSENBERGER, R

ART UNIT	PAPER NUMBER
2877	9

DATE MAILED: 02/08/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.

09/015,458

Applicant(s)

Yufa

Examiner

RA Rosenberg

Group Art Unit

2877

--The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address--

## Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

## Status

- ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 21-37 is/are pending in the application.
- ☐ Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 21-37 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
  - ☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been received.
  - ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.
  - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 2
- ☐ Notice of References Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other \_\_\_\_\_

Office Action Summary

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 21-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art discussed in the specification in view of Martin et al (US 4,160,246).

The specification states that the particle detecting systems intended to be used in the claimed invention are prior art. On page 1 of the specification, for instance, it is stated that "[s]uch devices, mostly using microprocessor processing systems and/or computers, are well known . . .". The admitted prior art, as illustrated by figures 1 and 2 in the specification, uses wires to connect the detectors to the control and/or processing electronics.

It is known in the art that the connection of a detector for airborne particles can communicate with a remote station which includes electronics by means of wireless communication systems. This is shown by Martin et al, which uses radio communication to send signals from optical particle detectors to a central annunciator. Although Martin et al does not show including a computer at the receiving station to process the data received, the use of a computer to process the

data is well known in the art and placing it at the receiver would have been obvious because it would require only one computer for all of the detectors and the power required to run the computer would be more readily available at the central station than at the battery powered detector stations. Converting the data in to a form appropriate to the communication link being used is obvious. Computers commonly have a multiplexed data and address bus, computer systems commonly have display means, disk drives for saving data, printers, etc. Converting the data into digital form so it can be processed by a digital computer is standard practice in the art.

Once the concept of sending information by a wireless channel between a detector station and a central station is known, using the same technique to send information in the other direction to control the detector station would have been obvious; two-way radio communication is so well-known that only official notice of this fact is needed.

3. Applicant provided on 21 January 1998 an 8 forms PTOL 1449 listing cited references, but no copies of the references listed thereon are present in the file. There was also a 9th and 10th page of listed references which were not listed on a form 1449, but are apparently referred to on the 8 form's 1449, with the notations of

the 1449's of "see page 9" and "see page 10". Copies of those references are also not in the file. There was a copies of several Met One brochures provided, but none of these documents are cited on either the forms 1449, nor on the two extra sheets.

The lack of copies of the references was noted in the previous Office action; note section 4 of that action. In response, applicant has submitted copies of five patent documents. It is noted that only two of these documents are listed on the forms 1449 previously submitted; patent 5,524,129 to Pettigrew et al and patent 4,798,465 to Knollenberg. The other three references, to Kreikebaum and Kreikebaum et al, are not listed on the forms 1449 provided. The two references cited on the 1449 which were provided have been considered; note the copies of the forms 1449 attached to this action.

4. The remarks filed 13 November 1998 argue that the Martin et al reference provides only one way wireless transmission from the sensor to the processing means. This is of course correct. However, once those in the art have recognized the usefulness of wireless communication between an optical particle sensor and its data processing means, as taught by Martin et al, it is a simple and straightforward extension of this knowledge to use two-way communication. Applicant is not the first and original inventor of establishing two-way radio communication between two stations; two-way wireless communication is so well-known. There is nothing

unobvious about establishing two-way wireless communication between two stations one wireless communication between those two stations is known.

The remarks of 13 November 1998 argue that the claimed device produces “a new unexpected result”. This does not appear to be correct; the result claimed, “wireless transmitting of the data, containing the particle dimension and quality information to the remote data processing station”, is exactly what would be expected upon the obvious use of wireless communication between the sensor and the remote data processing system. Wireless communication is hardly an unexpected result of using a wireless communication link, as taught by Martin et al.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will


the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Papers related to this application may be submitted to Group 2800 by facsimile transmission. The faxing of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (15 November 1989). The fax number is (703) 308-7722.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to R. A. Rosenberger whose telephone number is (703) 308-4804.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956.

R. A. Rosenberger  
5 February 1999



Richard A. Rosenberger  
Primary Examiner